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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,897	01/23/2004	Soichi Wakatsuki	MITPA10.001AUS	7774

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EXAMINER

MUI, CHRISTINE T

ART UNIT	PAPER NUMBER
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1797

NOTIFICATION DATE	DELIVERY MODE
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02/05/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/763,897

Applicant(s)

WAKATSUKI ET AL.

Examiner

Christine T. Mui

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,7 and 10-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,7 and 10-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see remarks, filed 26 November 2007, with respect to the rejection(s) of claim(s) 1-11 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of USP 5,651,574 to Tanikawa; USP 6,355,217 to Kiefersauer et al.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,651,574 to Tanikawa, and further in view of USP 6,355,217 to Kiefersauer et al.

6. Regarding claims 1 and 3, the reference Tanikawa discloses a micromanipulator with an upper parallel linkage connecting a base member and an opposed middle plate by links, a lower parallel linkage connecting the middle plate and an opposed base plate by links, a first finger attached to the base member of the upper parallel linkage, a second finger attached to the middle plate and is arranged opposite the first finger and drive controllers for effecting relative motions of the fingers (see abstract). Tanikawa does not disclose a trapping means that comprises of a trapping loop for trapping crystals gripped by the gripping means. Kiefersauer discloses a holding device for particulate material samples that features a carrier block for a loop holder that has a free mounting end for a particular sample, such as ones known from protein crystallography or cryotransferring of samples. The holding device is for particulate material samples especially a sample holder for particles with high fluid content like protein crystals. When obtaining crystal samples from protein crystals, the loop is passed back and forth over the capillary tip so that at least some of the solution is retained in the crystal. According to the device of the holding device, if it is used to mount particles of organic molecules, substances with a high water content,

sacchariferous substances, hydrated or dehydrated substances or polymer polysaccharides, the size of the capillary may be adapted accordingly. It is interpreted by the examiner that if the capillary may be adapted to mount particles, the loop may also be adapted to change to properly trap crystals of different sizes and place where particles are examined and crystals are extracted from the droplet are placed upon a surface that is a base for examination where it can be displayed and observed. Furthermore, the holding device is not restricted to just use with a vacuum tweezers when a capillary is used but can be also used with other holder devices in which the particulate material sample adheres to the tip of the holding capillary or loop through the effect of holder devices in which the particulate material sample adheres to the tip of the holding capillary through the effect of adsorptive forces, electrical forces or adhesive (see abstract, column 1, lines 5-8, column 2, lines 7-21, 41-67, column 6, line 61-column 7, line 44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a trapping loop in conjunction with the micromanipulator with fingers in obtaining crystals from a solution so that the crystals can be isolated and properly removed and analyzed without the possibility of contamination from human touch.

7. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanikawa and Kiefersauer as applied to claim 1 above, and further in view of US Publication No. 2004/0169693 to Nakamura (herein referred "Nakamura").

8. Regarding claims 2 and 7, the references Tanikawa and Kiefersauer disclose the claimed invention except for a lifting device on the base and a feed mechanism.

Kiefersauer discloses the holder device can be used with other device besides the holder device in the analysis of a protein crystal (see column 2, lines 54-59). Nakamura discloses an imaging apparatus having a head unit mounted thereon liquid droplet ejection heads with a plurality of ejection nozzles. A lift mechanism is included to lift the supporting plate where the liquid droplets are ejected from the nozzles to provide droplets on the plate for examination (see abstract, [0080-0083], Figure 8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a lifting mechanism to lift the device to raise and lower the platform the droplet is being examined on and a feed mechanism to provide liquid droplet to be examine to provide a convenient apparatus where the ejection, observing and analysis of a sample can all take place in one place at one time.

9. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanikawa and Kiefersauer, and further in view of Nakamura.

10. Regarding claims 10-11, the reference Tanikawa discloses a micromanipulator with an upper parallel linkage connecting a base member and an opposed middle plate by links, a lower parallel linkage connecting the middle plate and an opposed base plate by links, a first finger attached to the base member of the upper parallel linkage, a second finger attached to the middle plate and is arranged opposite the first finger and drive controllers for effecting relative motions of the fingers (see abstract). Tanikawa does not disclose a trapping means that comprises of a trapping loop for trapping crystals gripped by the gripping means. Kiefersauer discloses a holding device for particulate material samples that features a carrier block for a loop holder that has a

free mounting end for a particular sample, such as ones known from protein crystallography or cryotransferring of samples. The holding device is for particulate material samples especially a sample holder for particles with high fluid content like protein crystals. When obtaining crystal samples from protein crystals, the loop is passed back and forth over the tip so that at least some of the solution is retained in the crystal. According to the device of the holding device, if it is used to mount particles of organic molecules, substances with a high water content, sacchariferous substances, hydrated or dehydrated substances or polymer polysaccharides, the size of the capillary may be adapted accordingly. It is interpreted by the examiner that if the capillary may be adapted to mount particles, the loop may also be adapted to change to properly trap crystals of different sizes and place where particles are examined and crystals are extracted from the droplet are placed upon a surface that is a base for examination where it can be displayed and observed. Furthermore, the holding device is not restricted to just use with a vacuum tweezers when a capillary is used but can be also used with other holder devices in which the particulate material sample adheres to the tip of the holding capillary or loop through the effect of holder devices in which the particulate material sample adheres to the tip of the holding capillary through the effect of adsorptive forces, electrical forces or adhesive (see abstract, column 1, lines 5-8, column 2, lines 7-21, 41-67, column 6, line 61-column 7, line 44). Nakamura discloses an imaging apparatus having a head unit mounted thereon liquid droplet ejection heads with a plurality of ejection nozzles, a confirmation is made before starting an imaging operation as to whether or not the liquid droplet detectors having a light emitting

element and a light receiving elements. The droplet are dropped from an inkjet head that accurately ejects dot-shaped minute liquid droplets onto a device in a particular area where they are imaged to determine if the droplets are normally ejected from the respective ejection nozzle (see abstract, [0014]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a trapping loop in conjunction with the micromanipulator with fingers in obtaining crystals from a solution so that the crystals can be isolated and properly removed and analyzed without the possibility of contamination from human touch and an ejection device for ejecting droplets of liquid in a particular location for examination.

11. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable Tanikawa, and further in view of Kiefersauer.

12. Regarding claim 12-13, the reference Tanikawa discloses a micromanipulator with an upper parallel linkage connecting a base member and an opposed middle plate by links, a lower parallel linkage connecting the middle plate and an opposed base plate by links, a first finger attached to the base member of the upper parallel linkage, a second finger attached to the middle plate and is arranged opposite the first finger and drive controllers for effecting relative motions of the fingers (see abstract). Tanikawa does not disclose a trapping means that comprises of a trapping loop for trapping crystals gripped by the gripping means. Kiefersauer discloses a holding device for particulate material samples that features a carrier block for a loop holder that has a free mounting end for a particular sample, such as ones known from protein crystallography or cryotransferring of samples. The holding device is for particulate

material samples especially a sample holder for particles with high fluid content like protein crystals. When obtaining crystal samples from protein crystals, the loop is passed back and forth over the capillary tip so that at least some of the solution is retained in the crystal. According to the device of the holding device, if it is used to mount particles of organic molecules, substances with a high water content, sacchariferous substances, hydrated or dehydrated substances or polymer polysaccharides, the size of the capillary may be adapted accordingly. It is interpreted by the examiner that if the capillary may be adapted to mount particles, the loop may also be adapted to change to properly trap crystals of different sizes and place where particles are examined and crystals are extracted from the droplet are placed upon a surface that is a base for examination where it can be displayed and observed. Furthermore, the holding device is not restricted to just use with a vacuum tweezers when a capillary is used but can be also used with other holder devices in which the particulate material sample adheres to the tip of the holding capillary or loop through the effect of holder devices in which the particulate material sample adheres to the tip of the holding capillary through the effect of adsorptive forces, electrical forces or adhesive (see abstract, column 1, lines 5-8, column 2, lines 7-21, 41-67, column 6, line 61-column 7, line 44). Kiefersauer does not specifically disclose a second installation device for installing the trapping device, but it is interpreted by the examiner that the holding device can be used with other devices that the particulate material sample adheres includes a device such as an installation device to be used with the fingers to obtain a secure and tight grip on the crystal for analysis. It would have been obvious to

one having ordinary skill in the art at the time the invention was made to incorporate a trapping loop in conjunction with the micromanipulator with fingers in obtaining crystals from a solution so that the crystals can be isolated and properly removed and analyzed without the possibility of contamination from human touch.

13. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanikawa and Kiefersauer as applied to claim 1 above, and further in view of Nakamura (herein referred "Nakamura").

14. Regarding claims 14-15, the references Tanikawa and Kiefersauer disclose the claimed invention except for a lifting device on the base and a feed mechanism. Kiefersauer discloses the holder device can be used with other device besides the holder device in the analysis of a protein crystal (see column 2, lines 54-59). Nakamura discloses an imaging apparatus having a head unit mounted thereon liquid droplet ejection heads with a plurality of ejection nozzles. A lift mechanism is included to lift the supporting plate where the liquid droplets are ejected from the nozzles to provide droplets on the plate for examination (see abstract, [0080-0083], Figure 8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a lifting mechanism to lift the device to raise and lower the platform the droplet is being examined on and a feed mechanism to provide liquid droplet to be examine to provide a convenient apparatus where the ejection, observing and analysis of a sample can all take place in one place at one time.

15. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanikawa and Kiefersauer, and further in view of Nakamura.

16. Regarding claims 16-17, the reference Tanikawa discloses a micromanipulator with an upper parallel linkage connecting a base member and an opposed middle plate by links, a lower parallel linkage connecting the middle plate and an opposed base plate by links, a first finger attached to the base member of the upper parallel linkage, a second finger attached to the middle plate and is arranged opposite the first finger and drive controllers for effecting relative motions of the fingers (see abstract). Tanikawa does not disclose a trapping means that comprises of a trapping loop for trapping crystals gripped by the gripping means. Kiefersauer discloses a holding device for particulate material samples that features a carrier block for a loop holder that has a free mounting end for a particular sample, such as ones known from protein crystallography or cryotransferring of samples. The holding device is for particulate material samples especially a sample holder for particles with high fluid content like protein crystals. When obtaining crystal samples from protein crystals, the loop is passed back and forth over the tip so that at least some of the solution is retained in the crystal. According to the device of the holding device, if it is used to mount particles of organic molecules, substances with a high water content, sacchariferous substances, hydrated or dehydrated substances or polymer polysaccharides, the size of the capillary may be adapted accordingly. It is interpreted by the examiner that if the capillary may be adapted to mount particles, the loop may also be adapted to change to properly trap crystals of different sizes and place where particles are examined and crystals are extracted from the droplet are placed upon a surface that is a base for examination where it can be displayed and observed. Furthermore, the holding device is not

restricted to just use with a vacuum tweezers when a capillary is used but can be also used with other holder devices in which the particulate material sample adheres to the tip of the holding capillary or loop through the effect of holder devices in which the particulate material sample adheres to the tip of the holding capillary through the effect of adsorptive forces, electrical forces or adhesive (see abstract, column 1, lines 5-8, column 2, lines 7-21, 41-67, column 6, line 61-column 7, line 44). Nakamura discloses an imaging apparatus having a head unit mounted thereon liquid droplet ejection heads with a plurality of ejection nozzles, a confirmation is made before starting an imaging operation as to whether or not the liquid droplet detectors having a light emitting element and a light receiving elements. The droplet are dropped from an inkjet head that accurately ejects dot-shaped minute liquid droplets onto a device in a particular area where they are imaged to determine if the droplets are normally ejected from the respective ejection nozzle (see abstract, [0014]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a trapping loop in conjunction with the micromanipulator with fingers in obtaining crystals from a solution so that the crystals can be isolated and properly removed and analyzed without the possibility of contamination from human touch and an ejection device for ejecting droplets of liquid in a particular location for examination.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine T. Mui whose telephone number is (571) 270-3243. The examiner can normally be reached on Monday-Friday 8-5; Alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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CTM


WALTER D. GRIFFIN
SUPERVISORY PATENT EXAMINER